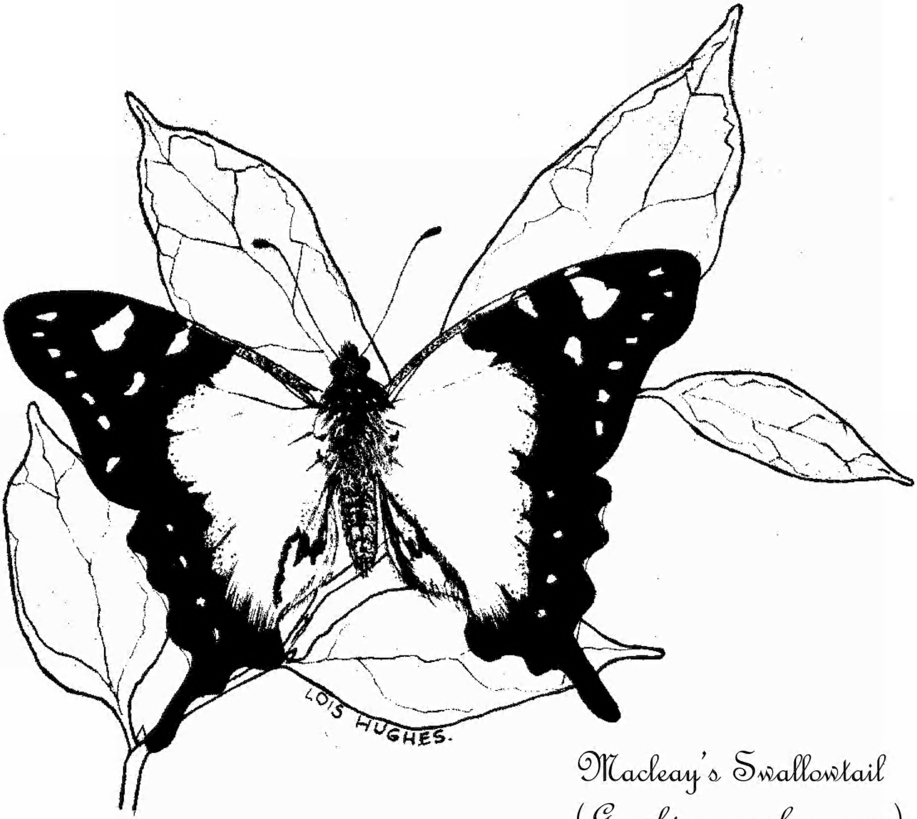

LOIS HUGHES.

Macleay's Swallowtail
(*Graphium macleayanum*)

Butterfly & Other Invertebrates Club Inc. Newsletter

ISSUE NO: 26 DATE: SEPTEMBER, 2002 ISSN: 1236-0006
http://cwpp.slq.qld.gov.au/butterfly

CLUB PLANNING AND ORGANIZING GROUP - 2002

President:	Helen Schwencke	07 3844 6677
Vice President:	John Moss	07 3245 2997
Treasurer:	Rob MacSloy	07 3824 4348
Secretary:	Frank Jordan	07 3844 6677
Newsletter:	Daphne Bowden (bowden@itconnect.net.au)	07 3396 6334
Librarian:	Terri Wolf	07 3814 3841
Register of Host Plants:	Rob MacSloy	07 3824 4348
Publicity:	Lois Hughes	07 3206 6229

PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS

PO Box 2113, Runcorn 4113, Queensland

AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st
June issue – May 21st
September issue – August 21st
December issue – November 21st

COVER DRAWING

Macleay's Swallowtail (*Graphium macleayanum*) by Lois Hughes

PRESIDENT'S POSTING

October this year sees our 8th anniversary as a Club. This has been an eventful time during which we have produced 26 newsletters, and a poster of the Swallowtail Butterflies of south east Queensland and northern New South Wales. In this time we have also offered a regular program of activities and excursions. Recently we developed a website (http://cwpp.slq.qld.gov.au/butterfly) with substantial support from friends, and numerous booklets on butterflies and their host plants. A four page brochure on host plants first produced by club members in 1995 has also recently been revised into a comprehensive 24 page booklet. Our most recent addition to our activities is a membership directory (of members who agreed to participate) that is being mailed out with this newsletter. Along with all these activities there are the routine tasks of managing a club of over 150 members. For all this effort I would like to thank our committee members, Rob, John, Daphne, Lois, Frank and Terri, and our many contributors, particularly our regular contributors. New members to our team are always welcome.

Our newest venture which started earlier this year is a series of half-day excursions to member's (developing) butterfly gardens. Our next visit is in September. Please see the program for details of these activities. If you've got a garden or some nearby bushland that you'd like us to visit please contact a committee member.

Helen Schwencke

IN THIS ISSUE

Creature Feature - Macleay's Swallowtail (*Graphium macleayanum*) 4
Plant Profile - Three-veined Laurel (*Cryptocarya triplinervis*) 5
Creature Note - The Moth (*Paralellia frontina*) 5
Reports - IndigiScapes Weekend 6
Two New Publications 6
Articles of Interest 10
A Special Offer to Club Members 21
Your Club's Membership Directory 21
Posters 21
World Wide Web Sites to Watch 22
Back Issues 22
Ads and Exchanges 22
Butterfly and Other Invertebrates Club Programme 23

CREATURE FEATURE

The following article features one of the Swallowtail Butterflies shown on our Poster, Lifecycles of the Swallowtail Butterflies of S.E. Queensland. The poster can be obtained from BOIC, PO Box 2113, Runcorn, 4113. The cost for members is $6 plus $5 postage and handling. Non-members $10 plus $5 postage and handling.

MACLEAY'S SWALLOWTAIL (*Graphium macleayanum macleayanum*)

One of our butterflies which has tails on its hindwings, is the Macleay's Swallowtail. These will become increasingly more common on hilltops as the summer months approach and will be mainly noticed as small black dots flying around the tops of trees.

Macleay's Swallowtail (*Graphium macleayanum*)

This problem, as with any other high and fast flying butterfly, is easily overcome by planting nectar producing flowers. This will inevitably bring them back to earth, so to speak, where they can then be admired at a closer range.

This butterfly is very similarly coloured to the Pale Green Triangle, so how is it recognised?

Well, as mentioned earlier, they have a tail on each of their hindwings.

Over the last two years, I have actually been able to raise the larvae of this butterfly for the first time since becoming involved with butterflies, way back in 1965. I now have them actively breeding in my Landsborough backyard, just by planting the right plants.

Which plants should you plant?

The best natives I have found for Southeast Queensland are: Rose Maple, (*Cryptocarya erythroxylon*), Domatia Tree, (*Endiandra discolor*) and Three-veined Laurel (*Cryptocarya triplinervis*), all of which are available from Barung Landcare at Maleny. (You may also like to check other native plant nurseries in your area - ed.)

The larvae are olive brown at birth, turning lime green in colour as they get older. The pupae are light green and are found on the underside of a leaf of the foodplant, suspended by their tail and a central silken girdle. They have a small projection on the head end similar to that of the blue triangle.

Further information on this subject can be had by reading, *"Butterflies of Australia",* by Common and Waterhouse 1981 and "*Butterflies of Australia*" by Michael Braby 2000

Bob Miller

PLANT PROFILE

THREE-VEINED LAUREL (*Cryptocarya triplinervis*)

HOST BUTTERFLY: Macleay's Swallowtail *(Graphium macleayanum)*

HEIGHT: Can grow to more than ten meters tall.

SHAPE: Nicely rounded canopy.

GROWTH AND FEATURES: Will tolerate full sun to a very shady position, but prefers a moist, well-drained soil. Suitable for a wide variety of soil types. Will flower and fruit profusely, especially in full sun. Evergreen.

FERTILIZER: Generally, a handful of one of the processed chicken manures (now readily available) upon planting, followed by a couple of handfuls every few months. Mulch to approximately 15 centimetres deep, keeping the mulch 15 centimetres from the trunk.

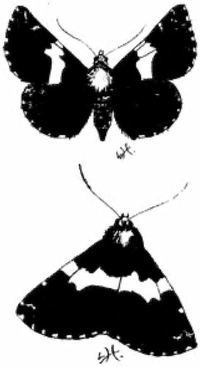
WHY WAS THIS PLANT CHOSEN? Of the foodplants listed on our club poster, in my opinion this is the one most suitable for the majority of garden situations. I took into consideration, height, conditions tolerated, butterfly preference and the overall look of the tree as a garden specimen. This tree is also one of the best I've found for the larvae of Blue Triangle (*Graphium sarpedon*). ***Bob Miller***

CREATURE NOTE

"The Moth *Paralellia frontina* in a case of mistaken identity!"

While visiting Ross Kendall's butterfly flight cage, my attention was drawn to a rather pretty moth, blackish with cream markings, which appeared to be in large numbers and was quite a feature, although quite unintended as I discovered.

Ross was curious as to why the larvae of the Large (or Common) Grass-yellow butterfly (*Eurema hecabe*) were completely defoliating his *Breynia oblongifolia* shrubs, although they were only in moderate numbers. On searching it became obvious that there were interlopers, semi-looper moth larvae (family Noctuidae) which were the "culprits". These were suitably evicted, except for a few I kept for photography and life history studies.


Parallelia sp.

My specimens duly pupated and the moth that emerged was the same species seen in Ross' flight cage! After checking Ian Common's "Moths of Australia" it appeared that the identity of this moth was either *Parallelia frontina* or *Parallelia latizona* – most likely the former.

However, all was not well back at the "ranch" as an overzealous assistant (who prefers to remain nameless!) had managed to dispatch many of the Grass-yellow larvae having assumed that they were the moth culprit! Ross tells me that all is now well and "assistant" forgiven!

John Moss

REPORTS

Redlands IndigiScapes Expo – 3rd and 4th August

2 days of glorious winter weather enticed several thousand people out of doors to connect with nature, as they joined the bushwalking tours and viewed the many interesting displays presented in the numerous shelters nestled in gardens and bushland. The highlight for many were the shy but inquisitive bilbies displayed by Frank Manthy.

The gardens were suffering the affects of the drought but many people bought plants nevertheless in anticipation of rain coming. We were kept busy, our booklets and posters proving very popular. Connecting with people who are eager to make their gardens butterfly friendly is very rewarding and brings rich personal rewards as many are realizing.

All things considered our weekend was a resounding success.

Lois Hughes

TWO NEW PUBLICATIONS

Review of the CD-ROM : A Garden on the Wing – Attracting Birds and Butterflies to your Garden by Garry Sankowsky.

This wonderful production combines the diversity and beauty of Australian butterflies with their equally magnificent and interesting hostplants.

The program can be used to either assess which hostplants apply for each listed butterfly or the reverse – i.e. which butterflies utilize each listed hostplant.

Garry defines a hostplant as one that if planted in the garden, will attract the particular butterfly. This includes suitable local native plants, non-endemic native plants and certain exotics, whether or not they occur naturally within the range of the butterfly. He says that the program is not meant to be a complete list of butterflies or hostplants. It has species that can most likely be attracted to a garden, and only their hostplants are mentioned.

Although the emphasis is on Queensland butterflies and plants there are butterfly sections for the other states, although these generally have only representative examples. There is also a section on attracting birds to the garden with flowers, fruits, feeders and artificial nest sites, and a smaller section on moths which illustrates a few of the more spectacular northern species and their hostplants. It is a little unfortunate that the scientific names of the moths were not included as common names do vary from place to place e.g. “Agricola Moth” in Sydney and “Joseph’s Coat Moth” in Brisbane are common names for the magnificent *Agarista agricola.*

Garry has a passion about not changing common names of plants or butterflies, so has used the familiar “old published names” throughout the program, unlike the new book on “Butterflies of Australia” by M.F. Braby which has many artificially produced “common names”.

Garry’s passion for butterflies and native hostplants comes from many years of dedicated fieldwork, nursery work and experimental studies. The observations and knowledge gained from that experience has made him such an authority on some plant groups (e.g. Aristolochias etc.), that even professional botanists could not attest to. As he says “I have all the plants growing and can compare them side by side”.

The program itself is very user friendly and the illustrations of both plants and butterflies are extremely good quality images taken from original 35mm colour transparencies.

Data sheets can be printed from each section, e.g. the Wanderer butterfly sheet gives information on distribution, preferred hostplants and some life history and background information with two full colour illustrations of butterfly and larva. Alternatively a page can be printed containing up to 8 smaller illustrations of images of adults, pupae and larvae.

The hostplant data sheets have up to four quality illustrations (in full colour if you have the printing facility) of the range of plants mentioned.

This CD-ROM, although primarily aimed at gardeners, is an excellent adjunct to the butterfly hobbyist's textbooks which rarely have illustrations of hostplants and larvae etc.

I personally would have liked a few more skipper species and their hostplants to have been included to show that even these 'lowly cousins' are worth attracting to your garden to increase diversity and interest. Nevertheless this CD-ROM is an extremely useful and entertaining production. Happy browsing.

John Moss

Ed: "Garden on the Wing" will be available within the next 2 months. You may like to check with Garry's web site at http://www.rainforestmagic.com for information. We will advise you of ordering details in the December Newsletter.

****

Butterfly Host Plants of S.E. Qld and northern N.S.W.

This publication, has been designed to enable both amateurs and more serious lepidopterists to quickly access information on the local host plants of butterflies of south-eastern Queensland and northern New South Wales.

Primarily the listing will enable suitable host plants to be used in suburban gardens to potentially increase general butterfly diversity or to enable specific butterflies to be introduced to a prepared site.

It is also a valuable resource for nurserymen and revegetation (landcare, bushcare, etc.) workers to identify plants that will be useful for adding diversity to bushland regeneration projects. The list is an expansion of one done previously by me for Greening Australia, where the plants were naturally afforded priority. Here I have attempted to place equal importance on both host plants and butterflies. The Greening Australia list perforce only included host plants which were available from the Greening Australia Nursery at The Gap, Brisbane. This new list contains 327 plant species for 201 species of butterfly, that is just over half the 397 Australian butterfly species are found in this region.

Although the listing is mainly of local native plant species, some other translocated native species and a few exotics (either as weeds or in cultivation) are listed where they are considered significant. However the list is not exhaustive and it has not been possible to include all possible species and some (mainly herbaceous species) were omitted. A few moth host plants have been included where either the moth or plant species are well known or quite attractive and/or interesting. If there is sufficient interest it may be possible to expand these moth host plants in future editions.

The standard reference for Australian butterflies is Braby, Michael F., 2000 "Butterflies of Australia, Their Identification, Biology and Distribution" which in an appendix tabulates recorded host plants for all Australian butterflies (as at 1998/99) and lists the relevant butterflies and abbreviated original reference. Braby also gives a "larval food plant" listing for individual butterflies in the section on each species. I have not attempted to do this latter (for cross-referencing)so the interested reader is referred to that publication for this information. In this list, both botanical and common names have been included for the plants, as well as former names and synonyms. Butterfly scientific and common names are listed and where there are alternative or superceded names, these have also been included as they may be more familiar or are used in earlier publications.

I should point out that much of the information in this listing postdates Braby and contains confirmation of some previously unconfirmed observations, plus new observations from some of our members and other serious observers, which have not as yet been published separately. Plants from previous lists that have since been shown to be erroneous have not been included, however a few still in contention are listed but qualified by a note that confirmation is required. I welcome feedback in regard to this.

Much as I would have liked, it was not practical to include a preferred habitat for each of the plant listings. This was covered reasonably well in the now out of print publication by BOIC member Graham McDonald, entitled "Growing a Butterfly Garden in South-east Queensland" [in Chapter 7 "Butterfly Food Plants for specific Plant Communities"]. However, our useful companion booklet "Butterfly Gardening" (also written by Graham) does list some of the plants by their preferred habitat in several vegetation complexes.

There have been several previous attempts at listing regional host plants for butterflies but none have been user friendly, comprehensive and accurate. Some of these lists quoted host plants whose botanical names were in dispute but did not list the alternative names (synonyms). Also, many "common" names have been misleading e.g. "Quandong" is applied to two quite different plants in 2 separate families. In addition "common" names can vary from region to region and many plants have more than one common name.

In the past, some observations were not always reliable with plant misidentification being a common error. Even when the plant was correctly identified, to establish it as a host, the butterfly should not merely oviposit upon it, but subsequently the larvae should go through and fully develop as pupae, with subsequent emergence of healthy adult butterflies. The mere act of oviposition does not necessarily mean that the particular plant would qualify as a valid host plant, as the larvae may well die after consuming some of the plant.

Although an attempt has been made to exclude errors in the booklet no doubt some have crept in and I hope our readership will bring these to my attention. Furthermore I request any new host plant information (published or not) be passed on to me for inclusion in any future reprint/edition. I hope you all enjoy reading this list and find it both stimulating and useful.

John Moss

This publication is available from the BOIC, PO Box 2113, Runcorn, 4113 at a cost of $5.50 plus $1.10 postage and handling.

ARTICLES OF INTEREST

Know Your Butterflies around the Sunshine Coast

I was asked to contribute a couple of articles on birds and also butterflies for a book being prepared by the Palmwoods Arts and Crafts Group Inc., PO Box 227, Palmwoods, 4555. It has now been published and is titled 'Wings Over the Sunshine Coast', ISBN 0-9579221-0-8.
The following is one of the articles submitted - **Bob James**

There are roughly 750 birds that either live in Australia or have been known to visit. Of these, many are so rare as to be unlikely to be found here again and many others are ocean birds. Of the remaining 650 birds or so that can be said to be found on land in Australia, more than 350 have been seen within 100km of Palmwoods on the Sunshine Coast in South-east Queensland. As for butterflies, Australia has around 400 species, and almost half can be found where we live. We also have a wonderful variety of frogs, insects and trees.

This demonstrates just how rich this Sunshine Coast area is. We are blessed with an abundance of wildlife that is not surpassed anywhere else in Australia. If you have an inclination to know a little more about the natural world, there is no better place to be.

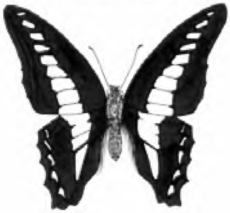
Most people commence their knowledge by tackling birds. The reasons are that we all know some birds to start with, there are not so many that the task is impossible, and there are now some excellent field guides to allow for ready identification. After some years of pursuing this pastime, the likelihood of finding new birds becomes slim, and it is usually then that the enthusiast sees a need for complementary challenges.

Identifying our common butterflies would be a good place to start. They are very noticeable, they are often brightly coloured, there are not many difficulties separating the obvious species, and there are good field guides available to help with the task. Another bonus is that during the hotter months, birds become much less visible with the onset of the heat of the day. This is just the time that butterflies become active, so a walk in the bush does not have to be curtailed at 9am if there are other items of interest to observe.

As with all such endeavours, namely the identification of species of a lifeform about which we know nothing, it can seem mountainous at the beginning. However, like all worthwhile exercises, it is a great deal easier than it seems if it is broken down into smaller segments. Learn a few easy butterflies, then all the common ones. By then, the back has been broken and your own interest will enable you to proceed. It is quite amazing how the mind is able to add one new species when it is different to those in its knowledge bank, however small that might be, and yet when everything is new and unknown, it remains a mysterious and unattainable world.

Think of it like starting to identify birds. We all knew a few before we became interested. Willie Wagtails, Magpies, Kookaburras and numerous others were familiar to us as children. With interest, we learned that there were other black and white birds apart from Willie Wagtails, but because we knew Willie so well, we were quickly able to recognise the Restless Flycatcher as a new bird, and reference to a field guide showed us what it was.

So start by learning a few of the very common butterflies. Many of the common names have been recently changed, so former names are given in parentheses. The first five which come to mind for the Sunshine Coast are the Blue Triangle, Orchard Swallowtail, Monarch (Wanderer), Common Crow and Black Jezabel (Common Jezabel). Be aware that butterflies need warmth, so they are most abundant between October and April.


Blue Triangle

The Blue Triangle is that lovely butterfly with the blue triangles in the wings that is readily seen both in gardens and around any patch of rainforest and, regrettably, Camphor Laurels. It can often be seen fluttering its blue wings as it hovers at lantana flowers. It is not the same as the beautiful Ulysses butterfly of north Queensland, which is larger and has metallic blue colouring.

The Orchard Swallowtail is that very large, mostly-black butterfly with patches of white on the wings. As its name suggests, it frequents citrus orchards, but it is also often seen moving through our gardens and forests. If you see a large blackish butterfly, this is probably it.

The Monarch (Wanderer) is the common orange butterfly of our area. It has a network of black lines through its orange wings, and is often to be found near patches of milkweed. The Wanderer has an interesting story. It is a North American native, and was unknown in Australia until the Milkweed was introduced. How the butterfly arrived is not known, but it is a renowned long-distance flier that annually migrates from its native home to Mexico. We can only speculate on whether it somehow managed its invasion of Australia by itself.

The Common Crow is another common black and white butterfly, but it is a little smaller than the Orchard Swallowtail. It differs in that it has a row of white dots along the outer margins of its mainly-black wings.

The Black Jezabel (Common Jezabel) is usually seen flying around the tops of trees. It is conspicuous because, from a distance, it appears to be white on the upperwing and black on the underwing. This gives it the appearance of flashing black, white, black, white as it flies. In truth, it also has small yellow and red patches in the black underwing, which are revealed when it settles to feed.

Because these five butterflies are so commonplace, and so different from one another, they form an excellent starting point for your initial foray into the world of butterflies. They are easy to practice on, because any walk in appropriate areas would probably yield at least three of the five.

Now for some other common butterflies. The medium-sized lemon butterfly that flies quickly past at several metres above the ground is likely to be a Lemon Migrant. Simple as that. If you see a lemon-yellow butterfly flying quickly past, chances are that it is a Lemon Migrant. It is also one of our migratory butterflies, and sometimes these occur in many thousands all along the coast.

Even easier is the Common Grass Yellow. If you see a small buttercup-yellow butterfly flying slowly along the ground, this is likely to be it.

Now those who know their butterflies will be aware that the buttercup-yellow butterfly on the grass might possibly be a No-brand Grass Yellow, or the high-flying white butterfly around the tops of trees might be a Scarlet Jezabel (Northern Jezabel), and indeed they might be right. However, the aim here is to point novices in the right direction, and as they become interested and skilled, they will find these things out for themselves.

The extremely small bluish butterfly that is found among grasses is the Common Grass Blue, one of the very difficult Lycaenids. This group, the Lycaenids or small blues, is to the butterfly world what the small brown jobs are to the bird world – for enthusiasts only.

Blue Tiger

Two other butterflies become extraordinarily common on the Sunshine Coast during migration, and they are the Caper White and Blue Tiger. The Caper White has black and yellow on its mainly white wings, and the Blue Tiger is similar to the Wanderer, but with a pattern of blue spots through its black wings. Both of these butterflies occur in countless thousands during their migration periods, which do not usually coincide, but appear to happen for each species roughly every three or four years.

One final butterfly deserves special mention when discussing butterflies of the Sunshine Coast. The beautiful Richmond Birdwing belongs to the big and bold group called swallowtails. As with many of our butterflies, the female is the larger, and the species is sexually dimorphic, meaning that the sexes are coloured differently. The male has black wings with striking iridescent green patches. The female is superficially like an Orchard Swallowtail, being mostly black and white. This is the largest of the butterflies that are found in our area.

The Richmond Birdwing has suffered greatly as a result of the clearing of rainforest that contained the Aristolochia vine, the host plant for its larvae. It is said that around 1870, they were abundant in the streets of Brisbane. Those days are gone forever, and the butterfly is now classed as vulnerable. A major recovery program has been put in place to try to save the Richmond Birdwing, and it revolves around the propagation of its host vine. Everyone should be encouraged to plant *Pararistolochia praevenosa* vines on their properties to ensure that coast residents will continue to enjoy this spectacular butterfly.

Pararistolochia praevenosa

If you or any of your neighbours have the introduced Dutchman's Pipe (*Aristolochia elegans*) with its much larger flowers, please do all you can to eradicate it. The Richmond Birdwing females will readily lay eggs on this plant, but the larvae are doomed, as they will be poisoned when they eat the leaves.

If your appetite has been whetted, your next requirement will be a guide to species so that you know what you are looking at. There is an excellent inexpensive wall chart available from the Butterfly and Other Invertebrates Club in Brisbane that shows the upperwings of many Australian butterflies. This is certainly adequate for the beginner. As time goes by and knowledge increases, it will become evident that underwing patterns are diagnostic in some species, and access to the somewhat more expensive Butterflies of Australia by Common and Waterhouse is necessary. The absolute reference for Australian butterflies is the recent Butterflies of Australia by Michael F. Braby, a marvellous publication that is quite expensive. Public libraries might have these books, and various other reference books are available.

This interest will now lead to a desire to encourage these flying gems to visit your own garden. As with birds, judicious planting can result in your own backyard being a haven to these desirable insects. Care must be taken, of course. Planting a garden full of Grevilleas and Callistemons will bring a colony of Noisy Miners that will make life unbearable for other garden visitors. Variety is the key, and this applies equally for butterflies.

When we are considering our planting requirements for birds, we are normally contemplating the big showy fruiting or flowering plants. With butterflies, we must set our sights a little lower. Many butterflies restrict themselves to areas near the ground. In the bird world, these terrestrial birds would be insectivores, and we do not need to consider plants for them. However, with butterflies, we must provide low-growing plants to enable these low-flyers to thrive, so grasses, lomandras, sedges, herbs, vines, etc. must come into consideration.

Many of the plants that support birds will do the same job for butterflies. Butterflies have two requirements from your garden. They need to be able to feed themselves, and they need a nursery for their offspring. So the required plants can be split into two groups: food plants for the adults, and host plants upon which the females can lay eggs and on which the butterfly larvae can grow.

Be aware that the damaging grubs that eat all your European annuals are likely to be moths, not butterflies. Should you wish to support butterflies, the odd leaf will be the price that you pay to see them in your garden. Be aware, also, that poisons used in the garden will ensure that you have no such delights to enjoy.

Black or Common Jezabel (*Delias nigrina*) on Buddleia

The list of useful plants is far too long to provide here, but for food, butterflies need flowers. Lantana, for all its failings, is an excellent food plant for many adult butterflies. Many adults will also sip the nectar from the flowers of the host plant for its larvae. The most commonly-used nectar plants for adult butterflies are exotic plant species such as Buddleia, Ixora, Daisies and Pentas, not forgetting Lantana and Milkweed. Melaleucas and Callistemons are also useful as food plants for adult butterflies.

As for the larvae, butterflies are usually host-plant specific, and many have only a single species of plant that supports their offspring. Jezabels fly high because they seek mistletoe as a host for their eggs. Many butterfly larvae thrive on weed plant species, so perhaps there is room in your garden for some of the less-invasive weeds. Regarding other low-growing plants, several Skippers feed on *Lomandras*, and these plants can form a part of any garden. Native vines, of course, are very valuable to many butterflies. As examples, *Parsonsia straminea* is used by the Common Crow, *Pararistolochia praevenosa* by the Richmond Birdwing, and *Cissus opaca* and *Cayratia clematidea* by the beautiful Joseph's Coat Moth.

Other native plants that are used by butterfly larvae include Arrowhead Violet (*Viola betonicifolia*), Love Flower (*Pseuderanthemum variabile*), fern-leaved wattles (*Acacia* spp), Native Finger-lime (*Citrus australasica*), Kangaroo Grass (*Themeda triandra*),

Arrowhead Violet (*Viola betonicifolia*)

Paper Daisy (*Bracteantha bracteata*), Dwarf's Apple (*Breynia oblongifolia*), Karamat (*Hygrophila angustifolia*), Flame Tree (*Brachychiton acerifolium*), Native Cassia (*Cassia brewsteri*), Blady Grass (*Imperata cylindrica*), Native Caper (*Capparis arborea*), Emu's Foot (*Cullen tenax*), Native Laurels (*Cryptocarya* spp), Pavetta (*Pavetta australiensis*), Long-leaved Mat Rush (*Lomandra longifolia*), Paroo Lily (*Dianella caerulea*), Sandpaper Fig (*Ficus coronata*), Zig Zag Vine (*Melodorum leichhardtii*), Swordgrass (*Gahnia* spp), Red Ash (*Alphitonia excelsa*), Hop Bush (*Dodonaea* spp), and Lilly-pilly (*Acmena smithii*). This list will hopefully inspire you to grow some plants which will reward both yourself and some of our marvellous butterflies.

While not encouraging their planting, exotic species used by butterflies include Golden Rain Tree (*Cassia fistula*), Oleander (*Nerium* spp), Chinese Elm (*Celtis chinensis*), Scotch Thistle (*Onopordum acanthium*), Capeweed (*Arctotheca calendula*), Crepe Myrtle (*Lagerstroemia indica*) and Bird-of-Paradise (*Caesalpinia gilliesii*).

By now, you should see that Palmwoods and its surrounding areas provide a marvellous opportunity for a closer link to nature, and both birds and butterflies can yield great rewards for those who wish to pursue these interests. We can all do our part to provide a friendly environment to allow these flying marvels to thrive and prosper. We can all help to make sure that those who follow us will be able to enjoy these natural treats just as we have.

Bob James

Bibliography:

Clyne, Densey (2000). Attracting butterflies to your garden. Balgowlah, NSW, Reed Books.

Schwencke, Helen and Frank Jordan (1992).Butterfly Magic. Brisbane, Qld, Earthling Enterprises.

Common, I.F.B. and D.F. Waterhouse (1981). Butterflies of Australia. Sydney, NSW, Angus & Robertson.

Domino Wall chart. Australian Butterflies.

Queensland Museum (1995). Wildlife of Greater Brisbane. Brisbane, Qld, Queensland Museum.

Fisher, Robert (1995). A Field Guide to Australian Butterflies. Chipping Norton, NSW, Surrey Beatty & Sons.

****

New host plant for the White-banded Plane

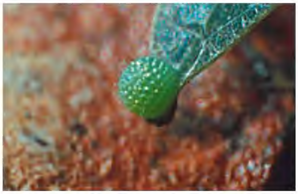
On the 18th of April 2002 I observed a White-banded Plane (Common Aeroplane butterfly) *Phaedyma shepherdi* lay two eggs on my potted specimen of Black Booyong, *Argyrodendron actinophyllum.* A close inspection of the plant, turned up several larvae and one pupa. All were collected and a week later the two eggs hatched.

The larvae have thrived on the plant and on or about the 1st August two larvae pupated.

Argyrodendron actinophyllum is a Rainforest tree, which can reach 45m. The leaves comprise of 5-9 (and rarely 3) leaflets radiating from a long 2.5-34cm petiole. (A petiole is the stalk of a leaf that connects it with the stem). The leaflets have wavy margins, and are 15cm long x 4cm wide. They are shiny green. Small, cream flowers in axillary clusters (that is a cluster that formed in the angle between a leaf stalk and the stem or branch) are followed by winged fruit. This is an endemic plant ranging from northern NSW to Central-eastern Qld.

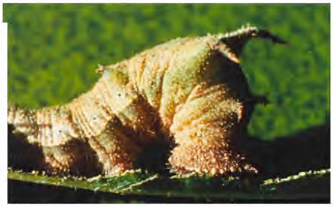
Argyrodendron comes from the Greek argyros meaning silver and dendron, meaning tree; it was named this because young branchlets, the underside of leaves, and the inflorescence (a flowering shoot of more than one flower) are covered by a silvery scurf of minute wheel-shaped scales. *Actinophyllum,* comes from Latin, and means radiating leaves.

Potted specimen of *Argyrodendron actinophyllum*



Left: *Phaedyma shepherdi* egg on the tip of an *Argyrodendron actinophyllum* leaflet.

Right: *Phaedyma shepherdi* larva



Peter Hendry

Footnote: All have now pupated with the first butterfly emerging on Saturday the 7th September

****

Growing mistletoes by Frank Jordan

Growing mistletoes is still quite a new gardening experience and most people start with trial and error as I did. What follows are some of the lessons I have learned over the years. There is still much to be learnt.

The first problem to be encountered is finding some mistletoes to start with and then managing to collect seed. Hopefully you will have already worked out which types of mistletoes you wish to grow. I started by looking for the ones that were able to support the largest numbers of different species of butterflies. As a beginner I also avoided those mistletoes not known to be used by butterflies. Luckily for me the mistletoes that I chose also happened to be the more common ones.

The easiest time to find mistletoes is in winter on deciduous trees where the green leaves of the mistletoes become quite conspicuous. Crepe Myrtle (*Lagerstroemia indica*) was a popular tree many years ago and today there are many large plants to be seen. These trees host the Apostle Mistletoe (*Dendropthoe vitellina*) and also *Amyema conspicuum*.as, well as others. Chinese Elm (*Celtis sinensis*) is another common tree and hosts *Amyema conspicuum.* They will probably have no berries at this time of year and you will need to check the trees from time to time until the berries are ripe.

Another way mistletoes give themselves away is when they drop their spent flowers on the ground. Unfortunately even with this clue it can be difficult to see the mistletoe above and usually it will also be far too high to reach easily or safely.

Another way to know if there are mistletoes in the area is to listen for the distinctive sounds of the Mistletoe bird. Follow the sounds and eventually you will be led to the mistletoes. This is fine for finding mistletoes but also means there will be fewer berries available for you as the birds will usually get to them first. However, this provides an opportunity to use mistletoe bird behaviour to your advantage. The mistletoe bird has been known to also eat the fruit of the Panama Berry (*Mutingia calabura*). This medium sized fruit tree has small red berries. If there are mistletoes nearby the mistletoe bird will then deposit these seeds when it visits to eat the Panama berries. This method requires some patience while the fruit tree matures. I have seen one tree that had been seeded with the Apostle Mistletoe in this way.

The mistletoes of gum trees are usually easy to spot because of their weeping habit. You will have to persevere until you find one that hangs close enough to the ground to reach. *Amyema cambagei* is difficult to find on its hosts, *Casuarina glauca* close to the coast or *Casuarina cunninghamii* along creeks. The small red flowers or pinkish berries will confirm its identity.

Another tree worth checking for mistletoes is the bottlebrush. These various species of *Callistemon* have flowers which attract honeyeaters. Some honeyeaters are also known to eat mistletoe berries and spread them around with the same effect achieved by the mistletoe bird. I was so impressed by the large number of different species of mistletoe on one particular bottlebrush that I collected its seed to propagate so that I would have an all purpose mistletoe host tree in the future.

Once you have located plants of the mistletoe species you are interested in, you need to keep an eye on them to ensure that you do not miss out on the berries. If there is a mistletoe bird in the area it would be considerate not to take all the berries.

Waiting for ripe berries to appear can sometimes take a long time. It would be wise therefore to ensure in the meantime that you have suitable hosts prepared for your seeds. Usually this means a tree of a similar species to the one the parent mistletoe is growing on.

Some mistletoes such as the Apostle Mistletoe have a very wide range of hosts and so if you have a large number of berries a bit of experimentation is sometimes useful. My most successful Apostle Mistletoe was established on *Acacia concurrens.* I had not initially considered it because it is relatively short-lived and I had never seen a mistletoe on this Acacia. I have also seen a small plant of this mistletoe on a pine tree (*Pinus* sp.) and one on Jacaranda. I have also seen a large *Amyema cambageii* growing on a fine leaved *Melaleuca* rather than its usual *Casuarina* host. So, if you don't have the usual host available don't give up, you may be lucky with an alternative.

Mistletoe berries usually indicate they are ripe by changing from green to some other colour such as white, red, yellow, black etc. Try not to squeeze them when picking them since this will release the sticky pulp surrounding the seed. I try to use the berries as soon as possible after picking since the pulp starts to lose its stickiness and the seed may start trying to germinate within the berry.

A Mistletoe butterfly Common Jezebel (*Delias nigrina*)

Mistletoe plants need sunshine to grow well so do not plant your seed on a branch that is in the shade or is likely to become completely shaded in the near future. When your plant is established it may be necessary to prune the host so that your mistletoe remains vigorous. If you do prune try to ensure that some green leaves of the host remain on that part of the branch beyond the spot where the mistletoe is established. This makes it less likely that that branch will die and the mistletoe with it.

Try to imagine how the host plant will grow in the future and plant your seed on a branch that is likely to grow vigorously. Small branches away from the main growth areas are more likely to die. With those mistletoes that produce runners I tend to plant near a fork so that the runner can grow along another branch. I avoid planting on branches with thick bark and only plant where the stem is still green. This makes it easier for the mistletoe root to penetrate into and attach to the host. Unfortunately on some trees it may be difficult to find suitably fresh stems or else the green stems may be far too thin for the larger seeds. If the branch is horizontal I plant on the upper side as there is less chance of the seed falling off.

Expelling the seed from its coat and attaching it to the host can be difficult at first but practice makes perfect. I usually do my planting without an audience as the stickiness of the seeds has too many inherent comic possibilities. Starting with larger seeds such as those of the Apostle Mistletoe will help to build confidence.

In the case of the Apostle Mistletoe I first work out where I want the seed to go. I hold the berry between my thumb and forefinger and gently squeeze. The seed will slowly emerge from one end. I apply the seed to the branch; a bit like putting toothpaste onto a toothbrush. The berry coat has a tendency to stay attached to the seed and so if you pull it away from the seed it will pull the seed off the branch. Sometimes it is possible to keep winding the tail around and around the branch until it becomes possible to pull the coat away without dislodging the seed. Usually it becomes necessary to use the forefinger and thumb of your other hand to gently press the seed against the branch while detaching the coat. Pulling slowly down with equal speed and pressure of thumb and forefinger on either side of the seed will then leave it attached to the branch.

One of the Mistletoe butterflies – the Northern Jezebel (*Delias argenthona*)

If all goes well the sticky stuff will dry and glue the seed firmly to the branch. With some seeds a root like structure will emerge from the side and eventually penetrate the host. Small leaves will then emerge from the seed and a new plant will grow. This is usually a slow process and several years can elapse before your plant will be large enough to flower and produce more fruit.

Many things can go wrong before success is achieved. Sometimes the seeds just fall off before the glue hardens – correct positioning can lessen this risk as will using fresh seed. Some trees seem to have as yet unknown ways to prevent a seed from attaching. Rain can also wash seeds off before the glue has hardened but usually not after it has hardened.

Large seeds such as the Apostle Mistletoe seem to be able to detect the correct direction for the root to go but smaller seeds sometimes go in the wrong direction. For smaller seeds it can be necessary to plant many seeds before even one successfully attaches.

Sometimes insects such as grasshoppers or perhaps caterpillars will eat the green parts of the seed before it germinates leaving just a hollow shell on the stem. Once the mistletoe plant has started to produce leaves it is once again vulnerable to grasshoppers and caterpillars. I was particularly pleased to have established an *Amyema miquelii* plant on a *Eucalypt* sapling. It had about five leaves on it when the Hedge Grasshopper found it and ate it. It did not recover.

This brings us to a dilemma that all butterfly gardeners have when first establishing a host plant. What to do when you find caterpillars or eggs on a plant that is obviously too small to support them. This is more of a problem with Jezebel butterflies as they usually lay their eggs in a group. I was thrilled when I found the first eggs on one of my Apostle Mistletoes. However the large number of caterpillars devastated the plant and it never recovered. Perhaps removing any caterpillars to the parent mistletoe may be an option. Perhaps establishing a few extra mistletoes at the beginning may make a few losses acceptable.

When planting your seeds it can be very helpful to mark the branch with coloured tape so that you can check the progress of your seeds. The seeds can be very hard to locate, especially if you have planted quite a few. If the seeds fall off or are eaten by insects you will then know to start again rather than thinking you have just forgotten where they are.

Dry weather can be a problem for mistletoes and they usually end up dying before the host plant does. The Panama Berry tree mentioned earlier lost all its mistletoes and many other branches during the dry weather of the last few years. The tree is still alive though.

I try to establish my mistletoes roughly about eye level so that I can see if any interesting butterfly caterpillars are in residence. However I try not to have them too close to the ground so that any visiting honeyeaters do not get eaten by the local cats. This becomes especially important if you want your plants to produce lots of berries for distribution to other mistletoe growers. Some mistletoes such as the Apostle Mistletoe can only be pollinated by birds and if they aren't pollinated don't produce any berries. You can hand pollinate the flowers but when I do it I only get a fraction of the berries produced by the birds. Incidentally the pollinators of my Apostle Mistletoe are the much maligned Noisy Miners.

The two easiest mistletoes to start with are probably Apostle Mistletoe and *Amyema miquelii. Amyema cambagei* would probably also be rewarding but it is not one I have grown myself yet.

The Zygo mistletoe *(Korthalsella* sp.*)* is an unusual mistletoe which is the host of the Nysa or Yellow Jezabel (*Delias nysa*). It is segmented and looks a lot like a Zygocactus. It is very difficult to see on its host plants and most people I know have found it only after seeing the butterfly flying around it. Unlike the other mistletoes it seeds are not spread by birds eating them. It produces masses of tiny berries at the joints and when these are ripe they each shoot out one tiny green seed about the size of a pinhead. The seed is surrounded by a sticky jelly. Several years ago I attached a few seeds to some of its known host plants growing in my yard. While most just seemed to sit on the stem until they eventually disappeared a few seemed to half bury themselves into the stem before I also lost track of them. I needed a hand lens to watch them. No mistletoe plants resulted from this experiment. Until more is known about this mistletoe it would be prudent to experiment on small plants that could easily be removed if the mistletoe were to become a problem.

Patience and perseverance would be useful qualities for those contemplating growing mistletoes. However the rewards are worth all the bother. Some mistletoes are attractive in their own right, and the Jezebels (*Delias* sp.), Azures (*Ogyris* sp.) and Jewels (*Hypochrysops* sp.) are some of the most colourful butterflies around.

Frank Jordan

A SPECIAL OFFER TO CLUB MEMBERS

My garden has been established for about 20 years and each year I get a large number of seedlings coming up. If any members would like some of these seedlings of butterfly host plants please send me a self-addressed Australia Post Air Bag (this can be sent folded up inside a 'business' envelope (22 x 11mm). Please advise which host plants you would like, or host plants for which butterfly would get better results. For instance I have numerous seedlings of various *Melodorums* each year but no *Aristolochias.* Foodplants for Tigers, Crows, Triangles, Swallowtails, Common Migrant (seed), Yellow Migrant (seed) and many others. These seedlings can be potted up and grown on for planting out in the garden.

If you send an overnight bag for plants, please advise any times you may be away as according to Murphy's Law I will send them when you are on holidays.

Plants will be sent sometime over the coming summer.

Send to: Garry Sankowsky, PO Box 210, Tolga Qld. 4882

YOUR CLUB'S MEMBERSHIP DIRECTORY

In February, 2002 your Club's organising committee decided to start encouraging members to network with each other in their local areas, and across their areas of interest. To this end we have now produced a membership directory. Only those members who have given us their permission have been included in the directory.

If you would like to be in a future issue of the directory please email Daphne on bowden@itconnect.net.au or phone: 07 3396 6334

POSTERS

The Club has recently obtained copies of 2 posters which had previously been unobtainable :

The Butterfly Alphabet Poster which shows all the letters of the alphabet and numerals 1-9 appearing in the wings of butterflies and moths. This poster can be viewed by visiting www.butterflyalphabet.com

Cost: Non-members $25 plus $5 postage Members $23 plus $5 postage

The Domino Poster - A guide for field, school or garden with 250 butterfly illustrations in colour
Cost: Non-members $10 plus $1 postage Members $8 plus $1 postage

Lifecycles of the Swallowtail Butterflies of South East Queensland, compiled by the BOIC
Cost: Non-members $10 plus $5 postage Members $6 plus $5 postage

These posters can be obtained from BOIC, PO Box 2113, Runcorn, 4113.

World Wide Web Sites to Watch

“Invertebrata” - the Newsletter of the Queen Victoria Museum and Art Gallery, Tasmania, is now online. Visit this site at www.qvmag.tas.gov.au/zoology/Invertebrata/Invertebrata.html

Back Issues

Back Issues of the Club Magazine are available at a cost of $1 each plus postage (1-2 copies $1.10 - 3-6 copies - $1.50.)

Ads and Exchanges

Sometimes you may have an oversupply of butterfly larvae and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective “foster parents’. Have **YOU** advised Rob of the host plants you have available?

****

“The Laced Fritillary” a painting by Lois Hughes. Prints now available. 12 beautiful butterfly card designs also available now. Phone Lois on 3206 6229.

****

In issue #20 we featured the Chequered Swallowtail and its hostplant *Cullen tenax.* Lois Hughes has quantities of *Cullen tenax* seeds available. Send a stamped addressed envelope to 163 West Mt. Cotton Road, Mt. Cotton, Qld. 4165

****

See Garry Sankowsky’s host plant offer in this newsletter.

****

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Visit a club member's garden at Capalaba
When: Saturday, 28th September, 2002 at 1pm
Where: 30 Melaleuca Drive, Capalaba (UBD 2000 Map 204 D11)
What: 1.5 acres of butterfly friendly gardens and natural bushland backing on to the Melaleuca reserve & Coolnwynpin Creek
Tea and coffee provided
Contact: Daphne 07 3396 6334 to RSVP or for more details

Visit a club member's garden at Beerwah
When: Sunday 20th October, 2002 at 10am
Where: Meet at Mill Park (UBD 2000 Sunshine Coast - Map 106 C19)
What: See Richmond Birdwing vines and other butterfly food plants, native bees.
After lunch some people may choose to go and look at other local sites.
Bring your morning tea.
Contact: Daphne 07 3396 6334 to RSVP or for more details

Planning and Management Meeting
What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome.
When: Wednesday 13th November, 2002 at 7.30pm
Where: Rob's place at Alexandra Hills.
Contact: Rob for details on 07 3824 4348

Visit a club member's garden at Munruben
When: Sunday 17th November, 2002 at 10am
Where: Meet at Wearing Park, Greenhill Road off Crowson Lane, Munruben, UBD 2000 Brisbane Map 279 K14
What: 5.5 acres, 1 acre being house garden planted with natives and exotics, including butterfly friendly plants, a pond with butterfly attracting plants.
Property backs on to 25 acres of Crown Land.
You are invited to bring your swimming gear for a dip in the pool. Bring your morning tea.
Contact: Daphne 07 3396 6334 to RSVP or for more details

End of Year BYO BBQ and Light-trapping
When: Saturday, 7th December, 2002 starting 4.30pm
Where: Minnippi Parkland, Stanton Rd West, Tingalpa (UBD 2000 Brisbane Map 162 B15)
What: A walk along Bulimba Creek and wetlands, followed by a BBQ and light trapping
Contact: Daphne 07 3396 6334 to RSVP or for more details

Gold Coast residents wishing to attend Club activities, contact Carmon Burke 5577 1013 re car-pooling

If you plan to attend any of the above events please respond to the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:
- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $12.00 for Individuals/Schools and $17.00 for family membership.
Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2113
RUNCORN Q. 4113

Next Meeting: A visit to a Club Member's garden at Capalaba – 28th September, 2002. (See programme for details)